



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0514; Project Identifier MCAI-2020-01570-T; Amendment 39-21890; AD 2022-01-02]

RIN 2120-AA64

Airworthiness Directives; De Havilland Aircraft of Canada Limited (Type Certificate Previously Held by Bombardier, Inc.) Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain De Havilland Aircraft of Canada Limited Model DHC-8-400, -401, and -402 airplanes. This AD was prompted by a report that the epoxy primer on the internal bore of the nacelle and landing gear attachment pins was not applied, and corrosion on the internal bore of the wing rear spar attachment pins was found. This AD requires doing a detailed visual inspection of the nacelle to wing rear spar attachment pins, and the nacelle and landing gear attachment pins, for any corrosion, and doing all applicable corrective actions. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact De Havilland

Aircraft of Canada Limited, Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email thd@dehavilland.com; Internet <https://dehavilland.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0514.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0514; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Deep Gaurav, Aerospace Engineer, Airframe and Propulsion Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued TCCA AD CF-2020-51R1, dated February 24, 2021 (also referred to as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for certain De Havilland Aircraft of Canada Limited Model DHC-8-400, -401, and -402 airplanes. You may examine the MCAI in the AD docket on the Internet

at <https://www.regulations.gov> by searching for and locating Docket No.

FAA-2021-0514.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain De Havilland Aircraft of Canada Limited Model DHC-8-400, -401, and -402 airplanes. The NPRM published in the *Federal Register* on June 29, 2021 (86 FR 34163). The NPRM was prompted by a report that the epoxy primer on the internal bore of the nacelle and landing gear attachment pins was not applied, and corrosion on the internal bore of the wing rear spar attachment pins was found. The NPRM proposed to require doing a detailed visual inspection of the nacelle to wing rear spar attachment pins, and the nacelle and landing gear attachment pins, for any corrosion, and doing all applicable corrective actions. The FAA is issuing this AD to address premature corrosion and subsequent failure of the nacelle to landing gear and nacelle to rear wing spar attachment pins, which if undetected, could lead to a single or dual collapse of the main landing gear. See the MCAI for additional background information.

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Use the Latest Service Information

Horizon Air requested that the latest service information be used in the proposed AD. Horizon Air stated that since the NPRM was issued, the applicable service information specified in figure 1 to paragraph (g) of the proposed AD has been revised to De Havilland Aircraft of Canada Limited Service Bulletin 84-54-31, Revision C, dated March 15, 2021. Horizon Air also requested that paragraph (h)(3) of the proposed AD be revised to allow credit for De Havilland Aircraft of Canada Limited Service Bulletin

84-54-31, Revision B, dated February 21, 2020, if those actions were performed before the effective date of the proposed AD.

The FAA agrees to use the latest service information in this AD. De Havilland Aircraft of Canada Limited Service Bulletin 84-54-31, Revision C, dated March 15, 2021, adds information to the “Effectivity” section for production airplanes, i.e., specifying airplane line numbers that will have certain ModSums (for application of primer and corrosion preventive compound) installed before delivery. This information does not affect the applicability of this AD.

De Havilland Aircraft of Canada Limited Service Bulletin 84-54-31, Revision C, dated March 15, 2021, also adds additional acceptable polyurethane enamel, and clarifies that production pins can be used to replace corroded pins. These changes do not affect operators who use previous revisions of the service information to show compliance with this AD. There are no substantive changes to the procedures between Revision C of the service information and Revision B, which was proposed as required in the NPRM. Further, the technical content of this AD and the service information remains unchanged. The FAA has revised the “Related Service Information Under 1 CFR Part 51” paragraph, Figure 1 to paragraph (g) of this AD, and paragraphs (g)(2) and (i) of this AD accordingly. The FAA has also added paragraph (h)(4) of this AD to specify the requested credit.

Conclusion

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this final rule with the changes described previously and minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and

- Do not add any additional burden upon the public than was already proposed in the NPRM.

The FAA also determined that these changes will not increase the economic burden on any operator or increase the scope of this final rule.

Related Service Information under 1 CFR Part 51

De Havilland Aircraft of Canada Limited has issued Service Bulletin 84-54-28, Revision B, dated January 24, 2020; and Service Bulletin 84-54-31, Revision C, dated March 15, 2021. This service information describes procedures for doing a detailed visual inspection of the nacelle to wing rear spar attachment pins, and the nacelle and landing gear attachment pins, for any corrosion; and doing all applicable corrective actions. Corrective actions include applying epoxy primer to the bore surface of the pins, a fluorescent magnetic particle inspection for any cracking, corrosion removal, reworking and part marking certain pins, and replacing any cracked or corroded pins with serviceable pins. These documents are distinct since they apply to different airplane configurations.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD will affect 41 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Up to 9 work-hours X \$85 per hour = Up to \$765	\$0	Up to \$765	Up to \$31,365

The FAA has received no definitive data on which to base the cost estimates for the on-condition actions specified in this AD.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022-01-02 De Havilland Aircraft of Canada Limited (Type Certificate Previously Held by Bombardier, Inc.): Amendment 39-21890; Docket No. FAA-2021-0514; Project Identifier MCAI-2020-01570-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to De Havilland Aircraft of Canada Limited (type certificate previously held by Bombardier, Inc.) Model DHC-8-400, -401, and -402 airplanes, certificated in any category, serial numbers 4001, 4003 through 4550 inclusive, 4583 through 4585 inclusive, 4587, 4588, and 4590.

(d) Subject

Air Transport Association (ATA) of America Code 54, Nacelles/pylons.

(e) Unsafe Condition

This AD was prompted by a report that the epoxy primer on the internal bore of the nacelle and landing gear attachment pins was not applied, and corrosion on the

internal bore of the wing rear spar attachment pins was found. The FAA is issuing this AD to address premature corrosion and subsequent failure of the nacelle to landing gear and nacelle to rear wing spar attachment pins, which if undetected, could lead to a single or dual collapse of the main landing gear.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Inspection and Corrective Actions

(1) At the applicable compliance times specified in paragraphs (g)(1)(i) through (iii) of this AD: Do a detailed visual inspection of the nacelle to wing rear spar attachment pins, and the nacelle and landing gear attachment pins, for any cracking or corrosion, and do all applicable corrective actions, in accordance with Part A or Part B, as applicable, of Section 3., “Accomplishment Instructions,” of the applicable service information specified in figure 1 to paragraph (g) of this AD. Do all applicable corrective actions before further flight.

Figure 1 to paragraph (g) – Service Information

Serial Numbers–	Service Information–
4001, 4003 through 4550 inclusive	De Havilland Aircraft of Canada Limited Service Bulletin 84-54-28, Revision B, dated January 24, 2020
4001, 4003 through 4533 inclusive, 4583 through 4585 inclusive, 4587, 4588 and 4590	De Havilland Aircraft of Canada Limited Service Bulletin 84-54-31, Revision C, dated March 15, 2021

(i) For nacelle to wing rear spar attachment pins, or nacelle and landing gear attachment pins, as applicable, that have accumulated less than 26,000 flight cycles as of the effective date of this AD, and have been in service less than 12 years from their entry-into-service as of the effective date of this AD: Prior to the pins reaching 14 years

from their entry-into-service, or prior to the airplane reaching 30,000 total flight cycles, whichever occurs first.

(ii) For nacelle to wing rear spar attachment pins, or nacelle and landing gear attachment pins, as applicable, that have accumulated 26,000 flight cycles or more as of the effective date of this AD, or have been in service 12 years or more from their entry-into-service as of the effective date of this AD: Within 4 years or 8,000 flight hours after the effective date of this AD, whichever occurs first.

(iii) For airplanes on which the actions specified in Bombardier Service Bulletin 84-54-27, dated August 11, 2017; or Bombardier Service Bulletin 84-54-28, dated August 11, 2017; as applicable, have been accomplished: Within 14 years or 30,000 flight cycles after the date of incorporation of Bombardier Service Bulletin 84-54-27, dated August 11, 2017; or Bombardier Service Bulletin 84-54-28, dated August 11, 2017; as applicable, whichever occurs first.

(2) For serial numbers 4583, 4584, 4585, 4587, 4588 and 4590: At the applicable compliance times specified in paragraphs (g)(1)(i) through (iii) of this AD, re-part mark the yoke attachment pin, in accordance with Part B of the Accomplishment Instructions of De Havilland Aircraft of Canada Limited Service Bulletin 84-54-31, Revision C, dated March 15, 2021.

(h) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using the applicable service information specified in paragraphs (h)(1) through (4) of this AD.

(1) Bombardier Service Bulletin 84-54-28, Revision A, dated April 10, 2019.

(2) Bombardier Service Bulletin 84-54-31, dated May 1, 2019.

(3) Bombardier Service Bulletin 84-54-31, Revision A, dated October 15, 2019.

(4) De Havilland Aircraft of Canada Limited Service Bulletin 84-54-31,

Revision B, dated February 21, 2020.

(i) No Reporting Requirement

Although De Havilland Aircraft of Canada Limited Service Bulletin 84-54-28, Revision B, dated January 24, 2020; and De Havilland Aircraft of Canada Limited Service Bulletin 84-54-31, Revision C, dated March 15, 2021; specify to submit certain information to the manufacturer, this AD does not include that requirement.

(j) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or De Havilland Aircraft of Canada Limited's TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(k) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) TCCA

AD CF-2020-51R1, dated February 24, 2021, for related information. This MCAI may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0514.

(2) For more information about this AD, contact Deep Gaurav, Aerospace Engineer, Airframe and Propulsion Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (1)(3) and (4) of this AD.

(I) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) De Havilland Aircraft of Canada Limited Service Bulletin 84-54-28, Revision B, dated January 24, 2020.

(ii) De Havilland Aircraft of Canada Limited Service Bulletin 84-54-31, Revision C, dated March 15, 2021.

(3) For service information identified in this AD, contact De Havilland Aircraft of Canada Limited, Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email thd@dehavilland.com; Internet <https://dehavilland.com>.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on December 21, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2022-01569 Filed: 1/26/2022 8:45 am; Publication Date: 1/27/2022]